Adagio for Color Fields - Interview

Anthony Stephinson of Goswell Road interviews Chris Korda
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AS: I remember my first home computer was a ZX Spectrum, though it wasn’t the first in our household, my older brother had a Dragon 32. I was always fascinated by the idea of cracking games so they could be pirated, which led me to attend a weekly computer club at age 8, but that was as far as my desire to code went. What was your first home computer, and when did you start collaborating with it/them?

CK: I started programming computers in 1980 at Sarah Lawrence college, on a DEC PDP-8 using Fortran. I displayed such a preternatural gift for programming that my teacher soon dissuaded me from attending class, and assigned me special projects from then on. For my final assignment, he had me program a popular game called Pente, with the user playing against the computer. My program used pattern detection to make multiple threats simultaneously, and infuriated my teacher, who spent a week losing to it before he finally found its weakness.

My first home computer was a DEC Rainbow 100 in 1982, on which I taught myself graphics programming in Pascal and assembly language. My friend Donald Kelly gave me a book of pottery designs from the Ute tribe, and encouraged me to write a program that would let us make similar designs and print them. I eventually created a vector-based graphical editor with advanced features for its time, named it the Ute Graphic Editor, and sold copies of it to other Rainbow enthusiasts. I also did many polar math experiments, which evolved into the *Whorld* project two decades later, and programmed a 3D renderer from scratch in collaboration with Robert Kimberk, who later co-founded the Church of Euthanasia.

AS: Redefining the tools you can work with evokes the Tech Epochs (https://wiki.travellerrpg.com/Technological_Epoch). It could be seen as unusual for “The Bob Dylan of Climate Change” to be so technologically savvy. Science and technology do not always go hand-in-hand for activists.

CK: I’m first and foremost a technologist, and my outlook is reducible to a combination of existentialism and scientific pragmatism. I divide human endeavors into two categories: science (predictive explanations of phenomena), and non-science. The latter subdivides into bogus explanations of phenomena (pseudoscience, religion, etc.) and endeavors that don’t claim to explain phenomena, for example poetry.

I see no conflict between scientific pragmatism and climate activism. The climate crisis is in large part caused by solipsism, the self-serving view that each of us is free to define reality however we see fit. Reality is not a role-playing game; on the contrary, reality is all too real, and it’s coming to get us, objectively, now.

AS: How were code and technology integrated into your early music, then your seminal CoE records, and how did that inform your later works using your own coding and software tools?

CK: By the mid-1980s I was thoroughly habituated to reduce problems to data and code. In addition to learning programming languages and computer architectures, I also learned abstract skills, such as the subdivision of a complex problem into smaller obstacles that can be independently overcome. Unconsciously, I had already embraced Karl Popper's dictum that "all life is problem-solving." As a professional software designer, it was my job to create tools that allowed others to more easily solve their problems. I often worked as a database programmer, and thinking abstractly about huge datasets prepared me for the intricacies of computer graphics and real-time signal processing. I became a toolmaker, and the process of making tools led me to new ways of thinking and creating.

Throughout this same period I was also an aspiring jazz guitarist, studying under notable tenorist Jerry Bergonzi, who taught me algorithmic methods for improvisation. I built a primitive polyphonic synthesizer using programmable sound generator chips, and converted Jerry's musical algorithms to computer code, resulting in a "robot band." This invention later evolved into my *ChordEase* software, which allows an instrumentalist to improvise over jazz chords, without doing the rapid music theory calculations that this would normally entail.

When I started composing electronic music in 1993, I was already conditioned to approach it as a series of interrelated programming projects. In retrospect, I was becoming a cyborg, in the metaphorical sense of enhancing my innate capabilities with self-made prostheses. I also became a pioneer, exploring hidden worlds revealed by my bespoke tools.

AS: When we first discussed your polymetric works a few years ago made with your Polymeter software, I floated this romantic idea of you making music for solar systems, equating the track lengths to pop songs for planets. I had no idea then that you had made the work *Planets* in 1994 which used the movement of the planets themselves to generate music, a soundtrack to the stars so to speak. What is the correlation between these impossibly long works that you generate with your music-making programs and the earlier *Planets* work?

CK: Such consistency and precision can only be achieved using computers. Computers have radically new capabilities, and open doors to radically new creations. I invite computers to co-create with me as equals because they have superpowers. The computer revolution is just getting started, and wonders lie ahead if civilization can manage to stabilize itself.

AS: Do the phase works refer to deep time?

CK: Not all phase works have long repeat times. For example, Thomas Wilfred's *Lumia* have repeat times that range from a few minutes to a few years. In comparison, my musical composition *Ala Aye* would repeat after 1.6 million years, while *Planets* would repeat after roughly four billion years, and *Adagio for Color Fields* might not repeat before the universe ends. Such works demand precision that only computers can provide. Computers broaden our experience by making micro and macro scales accessible, and my art reflects this computationally enhanced, fractal-like view of reality.

My long-term phase works relate to my environmental activism in the sense that both involve contemplation of geological and cosmic time scales, also known as deep time. Considering that homo sapiens emerged only a few hundred thousand years ago, a repeat time of a million years or more certainly qualifies as deep time. There’s also a connection to the Long Now Foundation, which promotes long-term thinking, for example by constructing a clock that will run for ten millennia.

AS: What came first: the art, the music, the coding, or the cult? Do they reinforce one another, live side-by-side, or live together symbiotically?

CK: These are oversimplifications. I have varied interests, which I have pursued to the extent of my abilities, within constraints imposed on me by society. My mother described me as a philosopher, and it’s apt.

AS: Do you still, or did you ever, consider yourself a cult leader?

CK: The Daily Star called the Church of Euthanasia a twisted cult, and who am I to argue with them? But if I’m a cult leader, I’m an exceptionally lenient one, as I’ve never demanded anything of my followers except that they eschew procreation.

AS: You have told me in the past that you would like to be known as an *artist-engineer*, can you explain this concept and why it appeals to you?

CK: The phrase I used was *inventor-artist*, and I first encountered it in reference to Thomas Wilfred, in the documentation of his 2017 retrospective at the Smithsonian Museum. Like Wilfred, I build machines that generate art. For example, I compose music by building virtual kinetic sculptures that output notes, and thereby produce compositions that could never be played, or even imagined without the assistance of computers. For another example, my *PotterDraw* software synthesizes virtual artworks that could never be physically constructed.

I consider Wilfred the patron saint of phase art. I was exposed to his *Lumia* machines during childhood visits to MOMA, but didn’t consciously connect them to my work until I saw his retrospective. I discovered his retrospective by accident, while on a pilgrimage to see James Hampton’s *Throne of the Third Heaven of the Nations' Millennium General Assembly*.

The term inventor-artist appeals to me because it puts technology and art on equal footing. This dovetails with another of my essential influences, Robert Pirsig’s 1974 book *Zen and the Art of Motorcycle Maintenance*. Pirsig notes that the Greek word for art is *techne*, and argues forcefully that art and technology were inseparable during the classical period. My primary activity is toolmaking, and I often invent tools to solve aesthetic problems. By making tools, I create domains within which artworks can be imagined and realized.

AS: With these particular generative artworks, what do you hope to achieve and where do they sit in relation to your other antinatalist activist work?

CK: I make generative artworks because I’m inspired to do so. The only connection I see between them and my antinatalist work is that in both cases I’m considering long time scales. I find long time scales comforting, because they remind me that civilization is a cumulative endeavor that necessarily outlasts individual lifetimes. I hope my efforts create lasting value and thereby improve the human condition.

AS: If *Adagio for Color Fields* was left running would it ever stop?

CK: Everything physical stops. Even stars die. Electronic circuits have a finite lifespan, typically a few decades at most. Presumably what you're really asking is, assuming it could magically violate the laws of physics and run forever, would *Adagio* ever repeat itself? The answer is indeterminate, because unlike the works it evolved from, *Adagio* is partially *stochastic*, meaning it makes use of randomness. Predecessors such as *Al Fasawz* and *Plasmagon* don't involve randomness, hence we can justly call them "pure" phase art, and easily predict precisely when they will repeat. In comparison, *Adagio* periodically randomizes its oscillator frequencies, roughly every eight minutes, and this makes its behavior extremely difficult to predict. If we could run *Adagio* literally forever, the same exact conditions would eventually reoccur, but it could take longer than the universe is expected to exist. Let's just say it won't repeat itself on any time scale that's currently relevant to human beings.

AS: Non-human scale artworks can take on many forms, these non-human scaled audio-visual generative works are also limited by the machines running them, are they able to evolve intelligently or do they have built-in limitations?

CK: None of my works evolve in the literal sense of heritable characteristics changing over successive generations. Scott Draves' *Electric Sheep* is an example of an artwork that evolves, because its parameters are heritable and mutate under selection pressure from crowdsourced voting.

Evolution should not be confused with intelligence. Life has been evolving on Earth for nearly four billion years, whereas intelligence arose with homo erectus roughly a million years ago. In entities capable of reproduction, heritable traits that increase the odds of survival are preserved and reinforced over time. Richard Dawkins aptly described evolution as "the blind watchmaker" and it is neither intelligent nor moral. Viruses evolve on a daily basis, but it would be absurd to call them intelligent, as they aren't even cells.

Certainly my works have limitations, but this fact is uninformative, because everything physical is necessarily limited, and every choice forecloses other choices. It would be more meaningful to ask whether the works overcome their limitations and achieve their aims, and in my opinion they do.

AS: Do you think AI is the future or the beginning/end of a cycle, and, have you created works using AI? And, are you coding with AI, or using AI code in your software?

CK: My *ChordEase* software is a type of AI, specifically an *expert system*, meaning a system that emulates the decision-making ability of a human expert, in this case of a jazz musician. I am not currently coding with AI in the modern sense of generative adversarial networks that model human neurology. I use such neural nets in my work, for example to generate the voices used in my electronic music, and to generate surreal images from prompts.

Regarding the future, we will spend the next century moving our coastal infrastructure inland, starting with our airports, and I doubt AI will be much help with that. In general AI serves as a useful distraction from climate change, which is a vastly greater and more certain threat.

AS: Do you consider (your) software as a form of activism?

CK: The free software movement seeks to obtain and guarantee the freedoms to run, study, modify, and share software. The struggle against proprietary enclosure of software is a type of intellectual property activism, but it's not at the level of the civil rights movement, environmental movement, and so on. I distribute my software freely because doing so advances the state of the art, and because free software is a step towards a more altruistic, gift-based society.

AS: Both Culture-Jamming and Synesthesia* relate to situationism, and situationist practices. Do you consider your work post-situationist?

CK: Situationism seems unrelated to synesthesia since according to Wikipedia, "the first medical description of 'colored hearing' is in an 1812 thesis by the German physician Georg Tobias Ludwig Sachs," whereas Situationism arose from Lettrism after WWII. Furthermore, the cognitive condition of synesthesia is involuntary and automatic, unlike situationism which is primarily a critique of capitalism. Referencing psychogeography only weakens the case for relatedness, since Guy Debord's description of psychogeography as 'charmingly vague' unmistakably brands it as pseudoscience.

Regarding my own work, the Church of Euthanasia is broadly categorizable as neo-dadaism, and certainly makes use of détournement and culture jamming, and can be related to situationism for those reasons. Nonetheless I'm an implacable enemy of critical theory, which I regard as mummery intended to shield glib arguments from rational review by rendering them unintelligible. My rhetoric is honed by decades of technical writing, which seeks to illuminate rather than obfuscate. Setting the Church of Euthanasia aside, the rest of my work has no connection to situationism that I'm aware of. In general, I consider Marxist critique thoroughly discredited by the gruesome history of actually existing Marxist states.

AS: How do you think followers of the CoE would read these generative artworks? They can also be used as meditative tools, and arguably, have a quasi-religious aspect to them.

CK: I can't speak for the CoE's followers, and it would be foolhardy to generalize about such a heterogenous group, but I expect nostalgia would be the most common sentiment. The CoE's rapid spread was largely due to theatrical confrontations which were precisely tuned to the post-punk zeitgeist. I doubt that my generative artworks would similarly attract followers, nor do I see anything religious about them.

AS: Is the music the bridge(s) in-between all of your work, or is all of the work there to reinforce the music?

CK: I reject such oversimplifications. The history of my work is tangled and bristles with detail, like the work itself. I've been an artist, poet, author, lyricist, guitarist, vocalist, pianist, drummer, electronic musician, composer, graphic designer, software designer, engineer, inventor, sloganeer, teacher, motivational speaker, philosopher, and religious leader. Many of these activities have interacted with each other in synergistic ways. Common to all of them is curiosity, thirst for knowledge, desire for self-expression, and mastery of craft.

AS: Can code, or art, save the planet?

CK: The planet doesn’t need saving, because humanity is incapable of doing lasting damage to Earth. Nothing we do is comparable to the scale of the greatest catastrophes in Earth’s history. Even all-out nuclear war would be a minor setback compared to the Permian-Triassic extinction 250 million years ago. Biological evolution on Earth will end when the sun becomes hot enough to boil the oceans, approximately a billion years from now.

It’s our exceedingly complex and fragile civilization that is in mortal danger of extinction. We will either get serious about becoming a long-lived phenomenon, or we won’t be one. The question is, can code or art persuade humanity to prioritize long-term survival? I can’t give a definitive answer, but it’s worth a try, and certainly more interesting than playing golf.

** if we take synesthesia to be a simultaneous perception of multiple stimuli, it is not such a jump to relate it to the Situationist’s (particularly Debord) adoption of psychogeography. I would argue that they are deliciously related.*